



**LET'S PUT it
all
TOGETHER
1978**

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Association for Education of the Visually Handicapped
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Fifty-Fourth Biennial
Conference

Selected Papers:

**LET'S PUT IT
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1978**

Association for Education
of the
Visually Handicapped

June, 1978
Dallas, Texas

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1978
COPY ONE

ASSOCIATION FOR EDUCATION OF THE VISUALLY HANDICAPPED

Since 1853, only about twenty years after the first schools for blind children had been established in the United States, the Association for Education of the Visually Handicapped has been the professional association of educators of children whose educational programs required some adjustment because of their visual limitations. Over those years, the Association has naturally mirrored the nature of education offered to blind children. It was first known as Instructors of the Blind, then for many years as American Association of Instructors of the Blind. For most of those years its membership was made up chiefly of staff of residential schools because it was in such schools that blind children were usually educated.

However, in recent years special educational opportunities have been offered not only to the "blind" but to many children with varying degrees of useful vision, and that education has increasingly been in the public day school setting. With these changes the term "visually handicapped" seemed more accurate and more generally acceptable than the term, "blind." To accommodate to this, the name of the Association was changed in 1968 to Association for Education of the Visually Handicapped.

As specialization developed in the field, the Association adjusted by building its program around workshops which could reflect the many special interest areas, which could provide for small group discussion and solution of problems, and within which framework people with common interests could work together throughout the biennium as well as at biennial conferences. Student chapters, state and local chapters, and the regional organization adopted in 1974, all represent ways in which AEVH seeks to bring the Association closer to each member and to unite educators with common, and sometimes geographically specific, concerns.

AEVH also serves through publication of a professional journal, *Education of the Visually Handicapped*, a bulletin called *Fountainhead*, and a volume of selected papers from each biennial conference. The organization participates actively in teacher and paraprofessional certification, in development of standards

for the field, in training institutes, and in the encouragement and report of research. AEVH is affiliated with the Council for Exceptional Children, a department of the National Education Association; through cooperation with other national and international bodies the Association represents concern for visually handicapped children on many fronts. Each year, the popular AEVH brochure on education of the visually handicapped as a career is sent to many guidance counselors and young people who seek information relevant to their own choice of a profession.

For further information, write AEVH Executive Secretary, 919 Walnut Street, 4th Floor, Philadelphia, Pennsylvania 19107.

MEETINGS

The following is a list of the conventions of the American Instructors of the Blind (1853-1871), the American Association of Instructors of the Blind (1872-1968), and the Association for Education of the Visually Handicapped (1968-1978):

- | | |
|----------------|--|
| 1st Meeting: | August 16-18, 1853, at New York, New York |
| 2nd Meeting: | August 8-10, 1871, at Indianapolis, Indiana |
| 3rd Meeting: | August 20-22, 1872, at Boston, Massachusetts |
| *4th Meeting: | August 18-20, 1874, at Batavia, New York |
| 5th Meeting: | August 15-17, 1876, at Philadelphia,
Pennsylvania |
| 6th Meeting: | August 21-23, 1878, at Columbus, Ohio |
| 7th Meeting: | August 17-19, 1880, at Louisville, Kentucky |
| 8th Meeting: | August 15-17, 1882, at Janesville, Wisconsin |
| 9th Meeting: | August 19-21, 1884, at St. Louis, Missouri |
| 10th Meeting: | July 6-8, 1886, at New York, New York |
| 11th Meeting: | July 10-12, 1888, at Baltimore, Maryland |
| 12th Meeting: | July 15-17, 1890, at Jacksonville, Illinois |
| 13th Meeting: | July 5-7, 1892, at Brantford, Ontario, Canada |
| 14th Meeting: | July 17-19, 1894, at Chautauqua, New York |
| 15th Meeting: | July 14-16, 1896, at Pittsburgh, Pennsylvania |
| *16th Meeting: | July 12-14, 1898, at Lansing, Michigan |
| 17th Meeting: | July 9-11, 1902, at Raleigh, North Carolina |
| *18th Meeting: | July 20-22, 1904, at St. Louis, Missouri |
| *19th Meeting: | August 21-23, 1906, at Portland, Oregon, at
Salem, Oregon, and at Vancouver, Washington |
| *20th Meeting: | July 14-16, 1908, at Indianapolis, Indiana |
| *21st Meeting: | June 28-July 1, 1910, at Little Rock, Arkansas |
| *22nd Meeting: | June 25-28, 1912, at Pittsburgh, Pennsylvania |
| *23rd Meeting: | June 28-30, 1915, at Berkeley, California |

- *24th Meeting: June 4-7, 1916, at Halifax, Nova Scotia,
Canada
- 25th Meeting: June 24-28, 1918, at Colorado Springs, Colorado
- 26th Meeting: June 21-25, 1920, at Overlea, Maryland
- 27th Meeting: June 27-30, 1922, at Austin, Texas
- *28th Meeting: June 23-27, 1924, at Watertown, Massachusetts
- *29th Meeting: June 21-25, 1926, at Nashville, Tennessee
- *30th Meeting: June 25-29, 1928, at Faribault, Minnesota
- *31st Meeting: June 23-27, 1930, at Vancouver, Washington
- *32nd Meeting: June 27-July 1, 1932, at New York, New York
- *33rd Meeting: June 25-28, 1934, at St. Louis, Missouri
- 34th Meeting: June 22-25, 1936, at Raleigh, North Carolina
- *35th Meeting: June 27-30, 1938, at Lansing, Michigan
- *36th Meeting: June 24-28, 1940, at Pittsburgh, Pennsylvania
- *37th Meeting: June 26-30, 1944, at Little Rock, Arkansas
- 38th Meeting: June 24-28, 1946, at Watertown, Massachusetts
- *39th Meeting: June 21-25, 1948, at Austin, Texas
- *40th Meeting: June 26-30, 1950, at Philadelphia,
Pennsylvania
- *41st Meeting: June 29-July 3, 1952, at Louisville, Kentucky
- 42nd Meeting: June 27-July 1, 1954, at Batavia, New York
- 43rd Meeting: June 24-28, 1956, at Worthington, Columbus,
Ohio
- 44th Meeting: June 22-26, 1958, at Vancouver, Washington
- *45th Meeting: June 26-30, 1960, at Donelson, Tennessee
- *46th Meeting: June 28-July 2, 1962, at Miami Beach, Florida
- *47th Meeting: June 21-25, 1964, at Watertown, Massachusetts
- *48th Meeting: June 26-30, 1966, at Salt Lake City, Utah
- *49th Meeting: June 23-27, 1968, at Toronto, Ontario, Canada
- *50th Meeting: June 28-July 2, 1970, at New Orleans, Louisiana
- *51st Meeting: June 25-29, 1972, at Miami Beach, Florida
- *52nd Meeting: June 23-27, 1974, at San Francisco, California
- *53rd Meeting: July 5-9, 1976, at Louisville, Kentucky
- *54th Meeting: June 25-29, 1978, at Dallas, Texas

*Copies of convention proceedings or selected papers for these meetings may be purchased by writing to the Association for Education of the Visually Handicapped, 919 Walnut Street, 4th floor, Philadelphia, Pennsylvania 19107. Copies of the Indexes for 1922-1930, 1931, 1932-1940, and 1944-1960 are also available.

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Programs for Visually Handicapped
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Improvement

Geraldine T. Scholl

NAC's Educational Standards Project on
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Guides for Pre-School Services and
Special Schools for the Blind and
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NOTE: A number of articles submitted for consideration for publication in this issue of the *Selected Papers*, because of their timely nature, have been scheduled for publication in future issues of the professional journal of the Association for Education of the Visually Handicapped, *Education of the Visually Handicapped*. For information about subscriptions to this publication contact: AEVH, 919 Walnut Street, 4th Floor, Philadelphia, PA 19107.

LET'S PUT IT ALL TOGETHER: TO
IMPROVE EDUCATIONAL PROGRAMS FOR
VISUALLY HANDICAPPED CHILDREN
AND YOUTH

Introduction

During the past few years several important projects have been underway - projects that ultimately will lead to improving the quality of educational programs for visually handicapped children and youth - projects that, to the credit of our field, have been coordinated and directed toward the common goal of program improvement. The theme of this Conference appropriately describes the current status of these projects. We are now ready to "put it all together": the teacher competency study, the guidelines, the day school guide, and the NAC residential school guide revision. The purpose of the following presentations is to put these interrelated projects together.

Of primary importance to any program is the quality of personnel, more specifically, the teacher's ability to teach. Competency-based teacher education has been talked about for a number of years. In the field of work for the blind a study was undertaken a few years ago to identify desirable and necessary competencies for teachers of the visually handicapped. The first section describes this project.

Guidelines for Preparation of Teachers for Visually Handicapped Children and Youth

Susan Jay Spungin

American Foundation for the Blind
New York, New York

Background

Perhaps the earliest formal effort to identify competencies needed by teachers of handicapped children was the study directed by Mackie for the U. S. Office of Education (Mackie, 1960). This study resulted in two publications related to the visually handicapped: *Teachers of Children Who Are Blind* (Mackie and Dunn, 1955) and *Teachers of Children Who Are Partially Sighted* (Mackie and Cohoe, 1956).

In the years that followed this study, interest in competencies for teachers of the visually handicapped was sparked by the efforts of the American Foundation for the Blind which sponsored two national work sessions, in 1958 and 1959. These sessions resulted in the publication of program objectives for a teacher education sequence and standards for college and university programs of preparation (Roberts, 1973).

The recent growing interest in competency based teacher education programs led to the completion of the most recent study in this area, *Competency Based Curriculum for Teachers of the Visually Handicapped: A National Study* (Spungin, 1977).

Procedure

From 1973 to 1975 the American Foundation for the Blind sponsored six meetings of representatives of 22 colleges and universities with professional preparation programs in the area of the visually handicapped (Spungin, 1977). After eight revisions, a field test edition of competencies for teachers resulted from these efforts. These competencies were developed under the following 12 goal areas:

- Goal 1.0 Teacher will demonstrate knowledge of normal and atypical development patterns in visually handicapped learners.
- Goal 2.0 Teacher will demonstrate the ability to assess visually handicapped learners using a variety of informal and formal procedures.
- Goal 3.0 Teacher will demonstrate the ability to select, design and/or modify specialized curricula for visually handicapped learners.
- Goal 4.0 Teacher will demonstrate proficiency in the operation of media and devices necessary for the education of the visually handicapped learners.
- Goal 5.0 Teacher will utilize instructional strategies to facilitate learning in visually handicapped children.
- Goal 6.0 Teacher can effectively utilize instructional materials, media, devices, aids, etc., appropriate to the individual needs of visually handicapped children.
- Goal 7.0 Teacher will demonstrate ability to identify and provide appropriate counseling and guidance services to visually handicapped learners, and significant others.
- Goal 8.0 Teacher will demonstrate ability to utilize local, state and national resources to assist in the delivery of services to the visually handicapped learner.
- Goal 9.0 Teacher will demonstrate knowledge of and opportunity for research with visually handicapped learners.
- Goal 10.0 Teacher will accept responsibilities of being a member of the teaching profession and will make a commitment to improve services for visually handicapped learners.
- Goal 11.0 Teacher will demonstrate ability to administer and/or supervise programs for visually handicapped learners, including ancillary personnel, para-professionals, and volunteers.

Goal 12.0 Teacher can demonstrate the ability to evaluate both instructional sequences and overall program effectiveness of various school programs and agencies serving visually handicapped learners.

The next part of the study involved field testing. Teachers were asked to respond to each competency on a 5-point scale whether they agreed or disagreed. They were also asked to define their roles and functions and to estimate the percentage of time spent in various activities. Responses were received from 807 persons, for a 41 percent response rate (Spungin, 1977).

For purposes of data analysis, the competencies were grouped as follows: assessment and evaluation, educational and supervision, media and technology, school-community relations and research. While variations appeared among teachers by role and proportion of time spent on various school-related activities, there was sufficient agreement with the competencies to warrant further study. An example of the competencies and format can be seen in the following:

Teacher will Demonstrate Knowledge of Normal and Atypical Developmental Patterns in Visually Handicapped Learners.

Entry Level of Competency:

Can demonstrate knowledge of normal growth and development from birth to adulthood.

Can demonstrate knowledge of atypical patterns of growth and development.

KNOWLEDGE	SKILL	ACHIEVEMENT INDICATORS
The teacher has: 1.1 Knowledge of the effects of visual handicaps on affective, psychomotor, and cognitive development.	The teacher can: 1.1.1 Identify the impact on development of congenital total blindness, congenital low vision, acquired visual loss, etc.	Proficiency is demonstrated when the teacher can: 1.1.1.1 Present orally and in writing examinations and tests as well as analyses of case studies.

Happily, the research portion of this study is completed and the publication is now available from the American Foundation for the Blind. One suggested area for future research was that this study should serve as the base for future assessment of teachers in order to provide direction for teacher preparation programs. Hopefully this study provides a good beginning; teachers in the field must now take the next step.

This document, while it may be idealistic in the number of competencies and the expectation that teachers should possess most or all of them, should nevertheless be viewed as providing an ideal. One next step should be the development of criteria for pre- and in-service teachers to assess the knowledge and skills they possess. This would entail adding specifics to the achievement indicators so that objective evidence of the competency could be obtained. Further, the document should be of value to supervisors and administrators in the field who are pressured to accept personnel who do not meet certification standards and are expected to serve handicapped pupils for whom they have no training.

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- Roberts, F. R. Preparation of Teachers. In B. Lowenfeld (Ed.), *The Visually Handicapped Child in School*. New York: John Day, 1973.
- Spungin, S. J. *Competency Based Curriculum for Teachers of the Visually Handicapped: A National Study*. New York: American Foundation for the Blind, 1977.

Program evaluation is mandated as part of PL 94-142. Effective program evaluation requires: 1) some consensus on the criteria necessary for assessing the quality of a program and 2) a mechanism for individual programs to measure their service activities against these criteria.

Standards for residential schools have been in existence since 1966 with the publication of the COMSTAC Report. Similar standards or guidelines are needed for day programs. The following section discusses a forthcoming publication from the American Foundation for the Blind which will provide guidelines for administration of day programs. You will note that these are called "guidelines" rather than "standards" because the latter term implies a degree of consensus arrived at through informal and formal input from practitioners. Such input will be forthcoming.

Guidelines for Public School Programs

Susan J. Spungin

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New York, New York

Background

We have for too long represented to the world that the blind need special treatment while at the same time asking the sighted population to treat the blind without unusual or other-than-normal attitudes. This seemingly opposing attitudinal structure has created across the nation a crisis situation in the development of special education program planning for our school-age visually handicapped youngsters.

Community public day school programs for the visually impaired have grown rapidly during the last forty years over the entire nation. In many cases, their development has been the result of a long, careful planning process by educators of visually impaired children. Other programs have evolved because of the expressed desires of individual parents to keep their children at home. Presently, the pattern is such that in each area the programs operate in a unique fashion depending upon geography, population, administrative policy, and the teacher's own perception of his or her role.

With state and federal mandates such as Federal Public Law 94-142, the Education for All Handicapped Children Act, children are being identified, assessed and, hopefully, appropriately programmed for

in the least restrictive environment. The public school has responsibility in the determination of the basic philosophy it holds with regard to children with special needs. This philosophy should be based on the premise that these children are *first* of all children with the same basic needs as all other children. Furthermore, their potential as productive and accepted members of society is not only great but is the school's responsibility to release. Within such a framework the public school must also realistically diagnose and understand the special needs occasioned by visual handicaps and attempt to serve these efficiently.

The education of blind with sighted children in public day school programs is predicated upon the basic philosophy that all children have a right to remain with their families and in their communities during the course of their education; that a visually handicapped child has a right to be counted as one of the children of the family and of the community; and that both the family and the community have an obligation to provide for the blind child, as a minimum, the equivalent of what he might have had if sighted.

A variety of organizational patterns or plans is often necessary for developing a complete educational program for visually handicapped children and procedures should be established to assure that each child will be placed in or transferred to the particular plan best suited to his needs at any given time. Organizational plans most frequently provided for these children are residential schools, special classes, resource rooms, itinerant teachers and teacher consultants.

It is important to note that, when listing the various organizational patterns of educational programs serving the visually handicapped, residential schools are clearly among the alternatives available. Two phrases in the Education of All Handicapped Children Act require placement procedures for each visually handicapped child to consider all programming variations and select the one individually suited to his needs. The two phrases to which I refer are *least restrictive* environment and *free appropriate public education*. No one person should be so naive as to think least restrictive environment simply means placement in a community public school program; if one meets the requirements implied in the phrase *free appropriate public education*, the public school program without the appropriate support services and special educational personnel could be considered the most restricted educational environment for the child.

At no time should different educational program services available to the visually handicapped child be viewed in isolation or as an either/or proposition. All programmatic patterns must be considered feasible at various times in a child's development, and the spectrum of educational alternatives should be treated as a continuum of educational programmatic considerations. In order to demonstrate that special education is a part of all education and to reduce the all-too-frequently existing dichotomy between programs, the special education teacher must play a fluid role, sometimes acting as leader but at all times being ready to play the supportive role in helping the team and the regular classroom teacher meet the needs of the child. It is the very role of the teacher of the visually handicapped that is in a period of transition and holds for the future a potentially critical period in teacher preparation programs, state teacher certification requirements, and emerging program models. The professional verbiage of the day espouses generic service systems supposedly to minimize duplication of programming for all exceptional children. Would that the term, "generic programming," for our handicapped soon become a process in special education to be wisely applied.

However, far too often we are finding the bases for generic programmatic approach economically devised rather than educationally sound. An example of the problems this approach creates can be found when looking at some state teacher certification procedures in special education. At present, in some states, one finds that certification to teach the visually handicapped is part of an overall credential to teach the physically handicapped. This trend to more broadly defined procedures for awarding credentials deserves close scrutiny to ensure that the special skills that are essential for teaching the visually handicapped school-age population do not become lost, or glossed over as being nice but not necessary.

The very early history of integration or mainstreaming in the field of special education for the visually handicapped had to over-emphasize the blind child's similarities rather than differences in order for public school personnel to accept a blind child within their school systems. As understandable as this approach is, it no longer serves us well. Educators of the visually handicapped, as well as some visually handicapped children themselves, have done such an excellent job of selling the idea of integration that the need for special professional expertise, as well as the special needs of the visually handicapped

population, has become blurred and, in some cases, totally ignored. It is time the profession steps back and articulates the differences that are unique to the visually handicapped child and the special professional and administrative supports required in order to actually realize the letter of PL 94-142 demanding appropriate educational programming.

Development of the Guidelines

PL 94-142, the Education of All Handicapped Children Act, will require that guidelines be established for the operation of programs and services to all handicapped pupils. During a 1976 meeting at the American Printing House for the Blind in Louisville, a group of concerned educators of the visually handicapped met to discuss ways in which such guidelines could be developed that would be useful in monitoring whether programs were meeting the intent of this legislation.

The meeting in Louisville stimulated the planning of a workshop which was held in St. Louis on March 21-25, 1977, under the sponsorship of the American Foundation for the Blind. Prior to this workshop, materials were gathered from various states that had existing guidelines for public school programs serving the visually handicapped. Fourteen professional educators in the field worked in three groups and prepared draft documents covering the following areas:

1. Administration, including legislation, funding, identification and assessment of the target population, program design and personnel
2. Program, including organization, continuum of services, early childhood, assessment, and teacher responsibilities
3. Program Supports, including physical facilities, materials and equipment, ancillary services and national/state/local resources

The products of the three groups were then combined into a draft document which was circulated to the participants for review and revision.

The document, with a preface written by Dr. Edwin Martin, is scheduled for publication, as a Practice Series Report, in August by the American Foundation for the Blind and will be available at a cost of \$2.00 each.

The document, which has been reviewed by professionals, will be of value to directors and supervisors in order to provide them with objective guidelines so that program quality cannot be eroded by interpretation of "least restrictive environment" as a regular class without necessary instruction in specialized areas or teaching by those not certified in the area of the visually handicapped.

These national efforts of the American Foundation for the Blind are only a beginning in addressing the many problems and issues concerning mainstreaming. Now more than ever before we need strong advocates fighting for programs specific to the needs of the visually handicapped population. Unless we make visible the special needs of these children they will continue, in ever-increasing numbers, to fall through the special educational cracks of the developing generic program models.

Since the publication of the residential school *Guide* there has been increasing interest in having a similar instrument for use in day school programs for visually handicapped pupils. The following section describes the background and development of a self-study and evaluation guide for day programs for the visually handicapped.

Self-Study and Evaluation Guide for
Day Programs for Visually Handicapped Pupils:
A Guide for Program Improvement*

Geraldine T. Scholl

University of Michigan
Ann Arbor, Michigan

Introduction

In 1975 the Standards Committee of the Association for Education of the Visually Handicapped was allocated funds by the Board of Directors to review the area of standards and to select some aspect for intensive study. The Committee recognized the need for an evaluation guide for day school programs as being most

*The study reported herein was funded in part by a grant from the National Study of School Evaluation, National Study Research Proposals, Bloomington, Indiana.

critical, and took a survey to identify those instructional areas over and above the typical school curriculum necessary to provide a quality program for visually handicapped students being educated in regular schools (Papineau, 1976).

A survey form was distributed to teachers to solicit opinions regarding specialized curricular areas. Responses were received from 42 teachers employed in various school districts from the states of Wisconsin, Maryland, Texas, and Florida. On the basis of data obtained from this form, 18 curricular areas were identified.

Data from this survey were used to prepare an application for funds to develop a self-study and evaluation guide. With the grant received from the National Study of School Evaluation, a project was initiated to: 1) review the appropriateness of existing guides used in assessing regular school programs, and 2) to develop a supplement or guide to assess the specialized instructional areas.

Summary of the Project

The study was conducted in two phases carried out simultaneously with participation by 104 teachers from five states: Texas, Oregon, Wisconsin, Maryland, and Minnesota.

The purpose of Phase I was to assess the extent to which existing guides published by the National Study of School Evaluation (NSSE, 1970, 1973, 1975), which are used by some regional accrediting agencies in the evaluation of regular schools, are appropriate for day programs for visually handicapped pupils. This review tested the assumption that school programs for visually handicapped pupils should include the full range of experiences provided normal pupils.

In general, there was a high level of satisfaction with the appropriateness of these guides to assess the curricular areas offered to visually handicapped pupils as a part of the regular school program. In general, no curricular area was viewed as inappropriate.

The purpose of Phase II was to obtain information from the 104 teachers regarding the relevance of degree of vision and level of intellectual functioning for each of the 18 curricular areas identified in the earlier survey. Teachers were requested to rate each area according to its importance for pupils with useful

vision and those with no useful vision and for pupils with varying levels of intellectual functioning: normal, mildly retarded, moderately retarded, and severely retarded.

The major findings were:

1. Six areas were considered as vitally important for all or almost all visually handicapped pupils regardless of degree of vision or level of intellectual functioning: daily living skills, leisure time activities, physical education, sensory awareness training, social skills, and visual efficiency training.
2. Nine curricular areas showed declining importance as the level of intellectual functioning declined: concept development, human sexuality, map reading, orientation and mobility, reference material skills, vocational training, braille, Optacon, and typing.
3. In general, teachers viewed all curricular areas as being equally useful for all pupils regardless of degree of vision. Some teachers viewed visual efficiency training as important for all regardless of how limited the vision; a few teachers viewed instruction in braille as important to pupils with useful vision.
4. There was a general pattern of introducing curricular areas later in the school years as levels of intelligence declined.
5. Abacus, braille, Optacon, and visual efficiency training were the only subjects considered to be exclusively within the purview of teachers of the visually handicapped.
6. In general, teachers indicated that instruction in the special curricular areas should begin early in the school years and continue throughout secondary school.
7. There was no evidence that any curricular area should be taught for a specified period of time; rather, each should be taught until proficiency was achieved.

Description of the Guide

With guidance from the study described above, a self-study and evaluation guide for day school programs was prepared. The open

narrative format of the National Study of School Evaluation instruments (1970, 1973, 1975) was adopted. Material from these instruments and from the National Accreditation Council national review and field test drafts of *Self-Study and Evaluation Guides* (1977) was used. The guide was designed to be used independently, or as an instrument to accompany the one(s) used by a regular school applying for accreditation from one of the regional accrediting agencies, or as an instrument used by a residential school conducting as part of its total program a day school component when applying for accreditation from the National Accreditation Council.

The *Guide* consists of the following sections:

- A. Instructions
- B. Philosophy and Objectives
- C. Program and Community Profile
- D. The Plan for Learning Experiences
- E. Instructional Areas Offered to All Pupils
- F. Special Instructional Areas and Techniques
- G. Non-academic Areas
- H. Evaluation Summary

Sections B and C solicit information in their respective areas relative to philosophy and objectives, the program, nature and needs of the pupils, and characteristics of the school and community. Section D requests general information about specific offerings in the three areas covered by Sections E, F, and G; in the three sections the staff provides specific information about these areas under the headings: Introduction, Nature of the Program (Planning and Organization; Instructional Content and Activities; Instructional Staff; Facilities, Materials, and Equipment), Evaluation, and Programming for Improvement from the four preceding sections.

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NAC's Education Standards Project on Revising Self-Study and Evaluation Guides for Pre-School Services and Special Schools for the Blind and Visually Handicapped

Following publication of the COMSTAC Report, the next step was to develop appropriate instruments that could be used by residential school staff and on-site review teams to assess the extent to which the school met the standards. The resulting document, published in 1968, is the familiar fat green book. The instrument was developed under the guidance of an advisory committee chaired by Dr. Jack Birch and was field-tested in five residential schools. It was during this field test that it became evident that the population of residential schools was changing. The change

to a largely multihandicapped school clientele was much more rapid than was anticipated, and the residential school guide was out of date almost from the beginning.

Revision of the *Guide*, however, was a monumental task and almost ten years elapsed before it could be undertaken. After several unsuccessful attempts to obtain outside funding for revision of the education standards, NAC decided to proceed with the project using funds from other resources. A coordinating committee was appointed by the National Accreditation Council to oversee the project. The committee, consisting of nine persons including two consumers, met in December 1976. At that meeting, four sub-committees were formed with specific responsibilities assigned to each for revising portions of the original guide:

1. Administration and other Sections
2. Curriculum
3. Supporting Services
4. Pre-School Services

A total of 25 persons served on these four sub-committees, some with overlapping membership on the coordinating committee.

The sub-committees met with the coordinating committee in January 1977 and began the task of revising the standards. In June 1977 their work was presented to the coordinating committee before field-testing.

The field-testing, conducted between September and December 1977, solicited input from two sources: organizations selected for a full field-test and the routine field review by volunteers from the field. For the full field-test review seven schools and four organizations conducting pre-school programs participated. The availability of the drafts was announced in the *Standard Bearer*, a publication of NAC, just after Labor Day. Persons involved in these two sources of input completed a *Suggestion Form* designed to transmit their ideas for improving the draft section. From both sources, 257 persons sent in 99 suggestion forms. Content from these suggestion forms was compiled by sections into a 65-page booklet.

During the spring of 1978, the sub-committees reviewed the input from the field and made their final revisions which were collated into a final draft for the review and approval of the coordinating committee in June 1978. The final step in the process is for the Commission on Standards and the Board of the National Accreditation Council to review and approve the 12 guides. They will be presented to the Commission and the Board in the fall of 1978. The titles of the guides are as follows:

- B-2, School Philosophy and Profile
- D-15, Preschool Services
- D-16, Other Service Program
- D-20, Curriculum Planning and Evaluation
- D-21, Program for Multihandicapped Students
- D-22, Program for K-12 Students
- D-23, Program for Independent Living
- D-24, Educational Resources Program
- D-25, Leisure Education
- D-26, Residential Living Program
- D-27, Health Services
- D-28, Educational Diagnostic and Counseling Services

The following sections describe procedures followed by and experiences of each sub-committee.

Administration and Other Sections

Geraldine T. Scholl

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Prior to the initiation of the Education Standards Project, NAC had subjected the five sets of standards for administration to a complete revision and field review. At the December 1976 meeting of the coordinating committee, NAC staff suggested that these standards seemed applicable to schools as well as agencies. The committee concurred and decided that they would be used during the field-test phase of the project. These sections were:

1. Function and Structure
2. Accounting for Services and Finances
3. Physical Facilities

4. Personnel Administration and Volunteer Service
5. Public Relations and Fund Raising

Subsequent use by schools involved both in this project and in the regular accreditation/reaccreditation process during this interim showed that these five sets of standards were indeed appropriate for schools.

The preparation of a statement of philosophy and objectives and of a school/community profile has always been a difficult task for both schools and agencies. Based on experiences during the past decade in working with schools and agencies on accreditation, NAC staff prepared a draft of *School Philosophy and Profile* for committee review. The committee recommended some minor changes in this streamlined version and approved it as being considerably more practical and useful for schools.

During the field-test process for the residential school guide in 1968, it was evident that some schools conducted programs which did not fit neatly into any section of the guide. A separate section, entitled *Other Service Program*, was developed to meet this need. During the interim, this section has proven useful for some schools and agencies seeking accreditation from NAC. It was therefore revised by NAC staff to be consistent with the remaining guides and was approved by the coordinating committee at its June meeting.

The final section for review by this sub-committee was *Evaluation Summary and Report*. The draft prepared by NAC staff in cooperation with the sub-committee had been used successfully in the field-tests by the seven schools. It too was approved by the sub-committee.

Curriculum

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The essential elements of the accreditation process include:
1) evaluation of the school's compliance with its own stated philosophy and objectives and the appropriateness of such philosophy and objectives to the reality of the school's

educational task; 2) evaluation of *all* components of the school's program; 3) evaluation through self-study; 4) review of the evaluation by a team of outside competent professionals; and, 5) periodic reevaluation. It is important at the outset to describe the nature of the evaluations outlined above. With few exceptions the standards by which the school and the outside review team evaluate the school refer to qualitative rather than quantitative aspects of the total operation. In other words, both school staff and outside reviewers are asked to use their *best professional judgment*. While total objectivity is impossible under these circumstances, the process of pooling best judgments does result in a remarkably creative outcome in most instances. Readers who have not participated in the NAC accreditation procedure will find it helpful to see a segment from a typical page of the new draft copy of *Program for Independent Living* as follows:

- () 4.1.4. *Role of School Staff.* Various school staff members are assigned definite and appropriate responsibilities as the primary instructors for various groupings of living skills.
- () 4.1.4.1. Instruction is provided in good posture, graceful movement, acceptable gait, dancing, body gestures and facial expressions (check the primary instructors for these skills):

<ul style="list-style-type: none"> — Living skills specialist — Physical education instructor — Orientation and mobility staff 	<ul style="list-style-type: none"> — Classroom teachers — Leisure education staff — Residence staff — Other (specify)
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Comments:

During the school's self-study, committees are appointed to study and evaluate all components of the program. As you can see from a quick review of standard 4.1.4., *Role of School Staff*, such a committee could easily become involved in discussion, even debate, of ideas and operations never before covered and become acquainted with intra-school activities and personnel in a new context. Picture, then, various committees covering perhaps 15 to 20 other components and you may see something like a beehive in midsummer. A frequent comment from schools, when the self-study is completed, is: "It was hectic but we learned a lot about our school." When the outside team receives the self-study, its members begin formulating questions and scheduling observations which will help to determine whether the school's own judgments appear to be consistent with philosophy and practice.

The sub-committee which developed standards for curriculum was assigned four major topics: 1) *Program for K-12 Students*; 2) *Program for Multihandicapped Students*; 3) *Program for Independent Living*; and 4) *Curriculum Planning and Evaluation*. This last topic is encompassed in a booklet which is designed to cover the *process* used by the school to ensure meaningful curriculum development, implementation, evaluation, and improvement.

We defined curriculum as:

all of the guided learning experiences which are provided by the school. The curriculum includes programs of studies; activities which supplement classroom instruction; recreational activities and all other experiences for the students which are under the direction of school personnel. The curriculum is structured to develop knowledge, skills and attitudes which prepare students to live in our complex society.

The guidelines for the *Program for K-12 Students* include standards for Planning and Organization; Personnel; Communication; Community and Career Education; Creative Arts; Home and Industrial Arts; Mathematics and Science; Physical Education; Study Skills; Work Experience Program; and Program Evaluation. The guidelines specifically state that while many students will enter and remain in the K-12 program, others may engage in selected classes or activities and at the same time participate in the school's special programs for the severely, moderately, or multiply handicapped.

The guidelines for the *Program for Multihandicapped Students* cover a broad range of developmental tasks. They are designed for use with each special program for moderately and severely handicapped students, with emphasis on those handicaps which significantly delay or alter rates and modes of learning. The development of this booklet is a significant new addition to NAC's standards.

The guidelines for the *Program for Independent Living* encompass the components usually associated with orientation and mobility *and* daily living skills. Among the standards are many which relate to the integration of these two curricular areas into all other aspects of the school's student programs and activities. The standards specify that the independent living program should be structured to serve students of all ability and functioning levels and all ranges of visual loss.

As indicated above, the guidelines for *Curriculum Planning and Evaluation* were designed to relate to the process used by the school to ensure on-going curriculum improvement. Thus the committee which is assigned to this area of self-study will review the above-mentioned curricular topics as well as several of those developed by other sub-committees as indicated in reports which follow.

Supporting Services

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Usually when closure is obtained on a project or committee report, a sense of relief and, hopefully, satisfaction is enjoyed by those responsible. With the Standards for Other Services of Special Schools Sub-committee, the response is certainly relief, definitely satisfaction and also excitement. You might question how one can become excited about standards. The answer is because the Self-Study and Evaluation Guides represent the quality requested and needed by professionals, paraprofessionals, and consumers in the field.

The "other" services covered by our sub-committee are Educational Resources; Leisure Education; Residential Living; Health; and Educational and Diagnostic Counseling Services. Each of the

sections is important enough by itself to be used separately or in conjunction with the other sections; each is cross-referenced with similar items in the other sections; each section provides for the needs of the multihandicapped students; and, each section responds to the need for multidisciplinary involvement in the development and evaluation of individualized educational programs.

The *Educational Resources* section represents a closely integrated relationship combining the media center concept with the traditional school library and the curricular programs. The key to meaningful integration is a designated staff member to coordinate the four basic services relevant to instructional media, methods, and equipment for staff and students. These are: textbook and instructional materials and services; library services; equipment services; and training and consultative services. The coordinator should use the standards to maximize the relationship between human and material resources both within and outside of the school to implement the total curriculum of the school.

The educational resources section is designed to recognize the alternative approaches which may better serve some individual school requirements due to factors such as varying enrollment figures. However, any alternative which means a reduction in the listed standards will likely result in diminished learning opportunities for students.

The *Leisure Education* section is completely new and involves much more than the recreation and student government types of activities within the original NAC standards. A coordinator should not only develop the basic leisure education program for after school hours and on weekends but also monitor various other instructional programs of the school for a developmental approach and consistency to the overall purpose of the program. This section received many supportive and encouraging comments during the field testing.

The section *Residential Living* is also a positive response to numerous requests from the field that specific standards be available for other than school day responsibilities of the residential school. The basic residential living program which is a vital component of the total educational system includes opportunities for independent living on and off campus; food and health related services; leisure education; transportation; and off-campus experiences. This section also incorporates the contributions of the residential living program to the individualized education program for each child.

The *Health Services* section includes the following services which can be provided directly by the school or through special arrangements with health facilities near the school or in the student's home community: evaluation; emergency care; routine medical services; vision; hearing; dental; health; counseling; and the prevention and control of communicable diseases. The facilities and equipment, as well as the security and control of all supplies and drugs, are also evaluated. The specific health needs of each student and pertinent information from the health services is also incorporated into the individualized educational program.

The final section of the "other services" available is the *Educational and Diagnostic and Counseling Services*. Due to the multi-team approach to developing and evaluating the individualized education programs of the students, this section is of vital importance to all of the other Self-Study and Evaluation Guides. The organization and composition of the diagnostic and counseling services is covered, as well as material, equipment, and facilities. The central school records and follow-up services are also included in this section with provisions for the extension of service to local education agencies.

The Sub-committee for Standards for Other Services of Special Schools greatly appreciated the invaluable assistance provided by scores of people throughout the country during the field-testing. The end product, we believe, will be invaluable in meeting the needs of the students we serve.

Pre-School Services

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There were no pre-school services guidelines offered in the first National Accreditation Council (NAC) standards. Why did we include them this time?

It was felt that the time was right for inclusion of such standards. With PL 94-142 mandating services for pre-schoolers, with research showing the gains made by those who are part of such services, with the increasing numbers of programs becoming available for that age group, with the interest in pre-school education

being generated across the country, and with no guidelines currently available, the time seemed right for such standards. Those who had been on recent site visits for NAC accreditation had found that the former standards were inadequate to assess such programs. There was a real need for pre-school standards, and the revisions of the NAC standards provided the opportunity to include such standards.

It was felt that the standards should begin right at the beginning, as soon after birth as possible. This would allow continuity through the pre-school years and into the school years.

However, trying to set one set of standards for the wide variety of programs seemed like an impossible task. There are not only residential programs, but also day programs within the residential schools. There are programs located at the school itself, but many facilities have itinerant programs where the teachers go into the homes of very young children. Some of these itinerant teachers work directly with the children while others work only with the parents, teaching them how to work directly with their children. Other itinerant teachers follow the visually handicapped children into community pre-schools where the children are integrated into regular programs. Thus, it was a difficult task to come up with one set of standards that would be able to meet the wide variety of programs offered by the residential schools.

Another problem considered was the large number of programs where visually handicapped children are not enrolled as part of a residential school. It is known that the majority of pre-school visually handicapped children do not attend programs in the residential schools but are in some other community setting. To take care of the many settings where visually handicapped pre-schoolers can be found, it was decided that the pre-school section should be a free-standing document. While many pre-school programs for such children have in the past been attached to a residential school or agency for the blind, more and more public schools are developing such programs under their own auspices. A guide is needed for all of those who are developing or already have developed such programs and are in need of evaluation criteria.

Standards for pre-schools was a particularly difficult topic to approach because of the fact that there have been very few guidelines for pre-school services in general. Most that are now available have to do with the numbers of square feet, lavatories,

and play areas that are needed for each child enrolled. It was necessary to begin at the very beginning which was done by developing guidelines from that which was known and experienced by a very competent committee.

The pre-school committee was chosen for its wide variety of expertise with pre-school visually handicapped children. This group was committed to write standards in general terms so that they could fit any setting as needed. Since working with infants involves a totally different curriculum from that of older pre-schoolers, general topics were drafted for inclusion, rather than particular topics. Staffing patterns were particularly noted, for it was felt that services from a multidisciplinary team were important, and, even though that team might not be available within the setting, it must be available within the community. Numbers of staff also came into consideration. Working with one parent in a home setting is certainly a different matter than working with a number of four-year-old sighted children in a setting where one or two blind children are integrated.

There was some difficulty in determining what the pre-school standards should be titled. *Pre-school* was really an inappropriate title since the children were already in some type of school program. *Pre-academic* was considered, for that would take the children up to the time they learned academic skills, the usual pre-school time period. However, the pre-academic term would also include the multihandicapped children who were beyond the pre-school age bracket, but not beyond the pre-academic level of functioning. The title *Pre-school (0-6 years)* was finally given to try to clarify the exact population.

You will notice that the pre-school guidelines have some overlap with the multihandicapped which go from 5 years up. This is to allow those completing the guidelines some leeway in filling out their forms. Some children at five or six would be considered pre-school and some might be considered multihandicapped. With the different administrative structures available in the residential schools, children could be placed in whatever program was felt to be more appropriate.

The pre-school standards are meant to be used in many ways. They can be used as a part of the regular residential accreditation process. For those programs that are free-standing, the standards can be used in conjunction with other NAC documents having to do with the administrative aspects of such a program.

The standards were field-tested and revised with the suggestions of the field-testers in mind. Undoubtedly they will need further revision, based upon changes recommended from the field, but they are a beginning. As more and more programs are developed to work with young visually handicapped children, the need for more direction to protect our children within the services offered will become evident.

"Let's Put It All Together" very succinctly describes the intent of the foregoing papers. Through cooperative efforts, these projects attempt to "put it all together" so that visually handicapped children and youth will have better educational programs, regardless of the setting where they are receiving their education. The completion of those projects, all directed toward program improvement, has been accomplished through joint activities of our professional organizations, notably the Association for Education of the Visually Handicapped and the Division for the Visually Handicapped of the Council for Exceptional Children; through our professional agencies, particularly the American Foundation for the Blind and the National Accreditation Council; and through all of us in the field working together: school and agency personnel; teacher educators; residential and day school teachers, supportive personnel and administrators; and, most importantly, parents and consumers of services. Truly, these are landmark projects for their emphasis on cooperation and soliciting input from the field.

MAINSTREAMING VISUALLY IMPAIRED CHILDREN IN VIGOROUS PHYSICAL EDUCATION

Charles Buell

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Introduction

Mainstreaming means the integration of visually impaired children into all courses which are feasible for them in the public schools of our country. In New Jersey blind children are included in vigorous physical education programs throughout the state. The benefits have been great, while the cost has been very little. School districts scattered throughout the country have also followed this practice. It is estimated that 5,000 visually impaired children are mainstreamed into physical education programs in public schools. On the other hand, it is estimated that at least 10,000 public school students are not being offered meaningful courses of physical education. This condition should not, and need not, exist.

Parents and educators who overprotect blind children do them harm, rather than helping them. Nearly 150 years of experience has confirmed Dr. Samuel Gridley Howe's belief that "Bumps and scratches affect only the bark, and do not injure the system like the rust of inaction." There is no evidence which indicates that visually handicapped children have more accidents than do their sighted peers. Experience has shown that only a few eye conditions can be endangered by vigorous physical activity.

Many parents and educators do not realize that visually impaired persons require higher levels of physical fitness than do their sighted peers. To attain the same goals, a blind person has to work harder and expend more energy. The only way any person can become physically fit is to participate in vigorous exercise. It is not as difficult to mainstream blind children in public school physical education as most people believe. The purpose of this paper is to describe briefly how blind students can be integrated into vigorous public school physical education programs and become physically fit.

Teaching Modifications and Class Assignment in Mainstreaming

When a visually handicapped child becomes a member of a public school physical education class, only minor changes need to be made in instruction. Some children will need more help, while others will need little or none. First, it must be remembered that at least three-fourths of legally blind persons have some useful vision. The presence of some vision usually makes the integration process easier. It will be helpful to most partially seeing children to be stationed near the instructor. For those having some useful vision, the teacher should determine by trial and error what they can and cannot see. Teachers should give clear verbal descriptions of what they expect the class to do. This will be particularly helpful to visually handicapped boys and girls. For students who are sightless, or who have very little vision, it is helpful to assign a "buddy." If the blind child does not understand the verbal description of an activity, his or her buddy can give assistance. The buddy may demonstrate the movement and let the blind child feel his/her body. Sometimes it is more helpful when the buddy moves the body parts of a sightless classmate. Notice that no additional instruction is required from the teacher. Experience has shown that buddies soon learn to give only needed assistance.

In large secondary schools totally blind boys and girls should be permitted to select units, rather than be assigned to a single class. A boy might select wrestling, weight training, and physical fitness activities, while a girl might choose dancing, swimming, or gymnastics.

The Activity Program in Mainstreaming

The activity program may be divided into activities which need no modification for visually impaired persons and activities which require minimal modification. Most blind individuals feel that the more an activity has to be modified for them to participate, the less desirable it is for mainstreaming.

Unmodified Activities

There are many activities which require little or no modification for successful participation by visually handicapped students in public school physical education classes. The teacher will find that an activity may need to be modified for one child and not for another. How much vision a child has and how well he/she

uses it will be an important factor in determining whether modification of an activity is necessary.

Wrestling is an activity which requires no modification, even for a sightless boy. If a sightless wrestler wishes to start in the "touch" position, he should be permitted to do so. Each year over 400 legally blind boys compete in interscholastic and intercollegiate wrestling against sighted opponents; the visually handicapped wrestlers win more such bouts than they lose. In high school wrestling 15 to 25 boys with little or no vision place in state meets each year.

Tumbling and gymnastics are activities which require little or no modification. Some blind gymnasts have won letters in interscholastic and intercollegiate gymnastics. Many gymnastic activities do not require vision, particularly rope climbing. Visually impaired students can perform on the trampoline. Somewhat more frequent and detailed verbal instruction may be required for some students.

Runners who have as little as 1/40 normal vision can safely run alone on tracks where hurdles and other obstacles have been removed. Many legally blind boys and a few girls have won letters in interscholastic and intercollegiate track and field.

Swimming, judo, and weight-lifting are other activities which fit easily into a mainstreaming program. Dancing on the secondary level and rhythms on the elementary school level require little or no modification.

Relays in which students run in pairs are ideal for a class in which one of the members is blind. Relays run on oblong mats make it possible for blind boys and girls to identify turning points as stepping on a different surface at the end of the mat is the cue to turn.

There are a number of individual races in which blind students can participate. For example, a sack race requires no modification except possibly a whistle blown at the finish line. Races in which pairs participate are ideal. Blind and sighted students can be paired in a three-legged race.

Activities Which Usually Require Modification

Some students will not require modifications in ball games, but many will. Here are some methods which have been used successfully.

A number of legally blind boys have played on high school and college football teams. In public school physical education classes flag football is commonly played. Since vision is not required to snap the ball or block straight ahead, students with little or no vision usually play the center or guard positions.

Since many visually impaired children have some useful vision, it is desirable to obtain brightly colored balls for them to play kickball, basketball, and soccer.

In volleyball, a sightless boy or girl may serve for both teams. A sightless player might attempt free throws for both teams in basketball. In softball, a student might bat from a tee for both teams. When not batting or attempting free throws, a blind boy or girl could be performing physical fitness activities such as jumping rope, running in place, or squat jumps or squat thrusts.

In kickball, a totally blind player can place the ball on home plate, kick it, and run bases with a sighted teammate. On defense, sightless players can serve as pitchers. They roll the ball toward the sound of the clapping hands of the batter.

For a sightless boy or girl, running may be somewhat more difficult, but certainly not impossible. He/she may touch or hold the elbow of a sighted partner in distances of more than 50 or 60 yards. Using this method, totally blind Harry Cordellos finished the Boston Marathon ahead of 1000 runners who had normal vision.

For sprints of 50 yards or so, it is best to have two students hold a sash rope about as high as the hips. The sightless runner lightly touches the rope to gain direction. Endurance can be gained by running back and forth using the sash rope as a guide.

Conclusion

It is feasible to include visually handicapped students in public school physical education programs. Those educators who are not doing so should base their attitudes toward blindness on fact, rather than on supposition and emotion. When blindness is more

generally understood, thousands of blind students who are now on the sidelines will be participating in physical education in the public schools.

CAN THE SIGHTED TEACH OR ADJUST TO THE BLIND?

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How many times have you heard a phrase similar to: "How rewarding your job must be?" The public praises us for our dedication because we work with the most dreaded handicap, blindness. Some of them even forget we get paid for our work.

Many blind adults lobby for only the blind teaching the blind, or for the blind making decisions for the blind. I do not want to stir up a controversy, but that is as ridiculous as saying a Tennessee Hillbilly like me cannot teach students from New York. But wait, somewhere during their lifetime this philosophy was formed. Did sighted adults, teachers, and social workers lead the blind to believe that they could not teach them? This may be somewhat true, but I do not for one minute believe that the sighted picture the blind as all Mr. Magoos.

I have been teaching the blind for almost a quarter of a century and still have doubts at times as to how well I understand or have adjusted to the blind. You may say, "If you can't adjust to blindness, why are you still in the area of education of the blind?" I do not believe anyone can really adjust to blindness whether the person is blind or sighted. A rash statement? Yes, but I believe if you are blind you learn to tolerate it, and, if you are sighted, you learn to work with it. A young man who went totally blind at the age of seven recently wrote on a college application the following statement concerning his blindness:

I was kind of a tough kid for seven years of age, a fighter, hard nosed. But when I discovered I was totally blind, I was the most frightened thing in a world I no longer knew and I know now, full of self-pity. Why me? I made it hell for everyone around who [could] see. Adjustment didn't come quick and it didn't come easy. One year later I was introduced to

wrestling. This was a turning point in my life. There have been other turning points in my life, like when I decided life was more than just demonstrating my physical abilities and I turned to the academics and learned to control my temper. As I look from this senior vantage point at those troubled, angry, rewarding years, I realize my school created a miracle. They took me out of blindness, they helped me dream new dreams, and I gained a new reality. A total adjustment to blindness? I'm not sure that a complete adjustment would be a good thing for me - or that one life is time enough.

Everytime I see a blind person I observe how they travel and if they have blindisms. If they are in a restaurant, I observe how they eat. Don't you? When I first started teaching the blind, I really hadn't thought too much about blindness except that I thought it was the greatest handicap. But I was young and energetic and dedicated to the philosophy that I wouldn't treat blind kids any differently because they were blind. As it turned out, my philosophy had many holes in it. I found myself talking mostly to the partially seeing students, and I really felt uncomfortable talking to the blind unless they were small kids. I think I have changed since then.

Blindness affects me in different ways according to my involvement with a particular child. I still have problems emotionally when a child I know, who had sight, goes blind. A couple years ago a child I had known since birth lost all of his vision at the age of three. He was, and is, a special child to me and this was one of the saddest days of my life. Two internationally known pediatric ophthalmologists I know have difficulty talking about partially seeing patients who lose their vision. I'm sure all of you have known a lot of sadness in working with the blind.

Is this a field the sentimentalist should avoid? We have heard the cry many times, "Don't pity the blind," but is compassion pity? I can definitely say no; and, if you don't have compassion, you shouldn't be teaching, period!

Yes, we, the sighted, see the blind differently. It is difficult for us to see their needs and their frustrations. The blind ask for equality, but want to be included with the disabled in collecting Supplemental Security Income. Some blind adults write and

talk of independence, but let a sighted guide lead them around. The sighted put on a sleep shade and "play blind." Can we ever adjust to each other's world? I hope so, but if we are to be effective with the blind, we must help change the attitudes of the public toward them.

Hector Chevigny, describing the onset of his blindness in the middle of this century, writes:

Toward the blind the world presents a face it turns to no other group on earth. Everyone must struggle for his existence, must fight for his survival. The blind however need not want. Society, profoundly convinced of the utter helplessness of a man who has lost his sight, stands ever ready to help him, whether his need be so small a thing as crossing the street or the larger one of food and shelter for the rest of his days.

Now let us look at the sighted teaching the blind. The teacher, whether blind or sighted, must be willing to learn on the job. There are many colleges that offer courses in the area of the blind, and I'm sure they teach effectively what they should teach, but nothing beats experience. Answer these questions to yourself: How do you feel when a blind stranger comes into a room? Do you orient your kids to your classroom each year? Are you amazed when a blind person is in a position of employment that does not fit one of the roles that you expect a blind person to play?

Last summer my family and I were on vacation on the Atlantic Ocean. I had been fishing and stopped at a small bar to have a beer. The place was almost empty; two men were shooting pool. The bar was long and I sat down at one end while the bartender was working at the other end. I waited 10 to 15 minutes and I hadn't been served, so I was ready to leave when another person came in and yelled to the bartender to give him a beer. The bartender immediately served the customer and, when he gave the change back to the customer, I realized he was blind. I then ordered and began to talk to him and found that he was the owner of the bar. Although I had observed the man working for 15 minutes, I didn't realize he was blind. Why? Because I never dreamed of a blind person being a bartender.

When we teach the blind, we must encourage them to play roles not expected of them in order to change the blind stereotypes and also to build up their self-concept.

Where should we go from here in teaching the blind? I feel that visually impaired teachers and sighted teachers must head down the same road. When we examine the awesomeness of what teachers are expected to accomplish, it is quickly recognizable that the education of children is a tremendous task. Let's face it, in the regular stream of education, and in special education, parents have abdicated many responsibilities to the school. The ensuing result is that many schools are de-emphasizing the basic fundamentals of education. We must not let this happen.

We must be adequately staffed if we are going to be all things to all kids. Just think of the tasks that we are undertaking in schools today. We begin with the parent-educator teaching the parent how to feed the child, how to toilet-train the child, what toys to purchase, and how to select a nursery school. Social workers attempt to save marriages. Residential and day schools both want to educate the child. We must provide an opportunity for teaching the basic subjects. Braille is still "in" for the blind and, although the Optacon is a useful tool, the blind child must still have a strong background in reading.

In math, no matter what tool we use to teach, we must work hard at it and believe in it. We've run the gamut in math. I first started teaching math on a Taylor slate; of course Texans had their own, the Texas slate. Then the braillewriter became the tool and Abraham Nemeth gave us the code. Then we found we were still not doing the job and down the road came salvation, the Schott Method. Teachers were taught how to use the method, but the method soon died because it was not doing the job.

Then from across the Pacific came the abacus. Another tool that was sure to save the blind from ignorance in mathematics. This has been widely accepted, but some of us got off the merry-go-round after Schott and have stayed with the braillewriter. We all have worried too much about the tool to use. We must believe in the method we use, and most of all, we must believe the blind can learn math. It may take more instruction, but that's one of the reasons we only have 6 to 8 students at a time.

As sighted teachers, teaching English and composition, do you mark and count off for braille errors? Probably you do. But I'll bet

most of you social studies and science teachers accept braille errors. Are you really teaching children if you accept errors? Yes, but you are teaching them that you don't expect as much from them as from the sighted.

Teaching the academics and integrating the visually handicapped child into the regular classroom is easy. If visually handicapped children are going to be accepted, they must learn to socialize. The acceptance by peers is the greatest need of any child, or any adult. The teacher must attempt to treat the blind child the same as any other child in the classroom. In school we find it much easier to give errands to sighted or partially seeing students. Blind students must be given responsibilities besides writing a theme on the braillewriter, working math on an abacus, or memorizing the 50 states and capitals. They need to build up their egos and self-esteem. They must be encouraged to participate in different types of activities that enhance their pride. This is easy in a residential school but is much more difficult in the mainstream; yet, it can be done. Students should be encouraged at an early age to participate in scouts, swimming, bowling, 4-H, and other group activities. As they get older, they can participate in all types of athletics, forensics, band, student government, plays, and the like. To get children into activities takes not only a simple suggestion, but also a dedicated effort by all teachers, social workers, houseparents, and parents. It is very easy for someone to take the easy way out, to let a blind child sit at home or in a dorm with a transistor radio to his or her ear fantasizing about becoming a disc jockey. It is easy to let the child sit and verbalize on all the activities of the world, never becoming a part of them. We must work to keep students from being confined to a restrictive environment. A child can be in a restrictive environment in a residential school, in a resource room, mainstreamed, or in his or her home - no matter how HEW or State Departments of Education define "least restrictive."

In addition to participation, children must be encouraged to compete, and I mean *compete*. When a visually handicapped youngster runs a 2-mile cross country race in 13 minutes and the winner runs it in 10 minutes, when high school students compete against sighted junior high students in athletics or music competition, this is not competition, but token participation. Athletic activities in schools for the blind have been the savior of many visually handicapped youngsters. They have not only provided an outlet for anger and frustrations, but also have helped give self-confidence

in one area, the physical, in which blind people are considered by the public to be seriously handicapped. If people are successful in roles that are not expected of them and gain recognition, that recognition helps build up their egos which probably have been deflated many times. It is very easy for sighted educators with doctorates to lobby in Congress for legislation for the blind - such as the right to place all blind children in the mainstream. But, many of these lobbyists have never worked down in the trenches, the classroom; many have never seen the happy face of a sweaty young blind man who has beaten his sighted opponent on the wrestling mat, or the tossed hair and the excitement of an albino girl who has just won the 75-yard dash.

As I look out over the horizon, I see residential and day school teachers, both sighted and blind, working together in harmony for the good of the child. We must work together and recognize that each child has different needs. Public laws will not change the needs of the child. You can't legislate education.

In closing, I would like for all of you to look at the products of our educational systems. Are they adults that we are proud of? I don't know about you, but I am proud of most of the students I have been associated with and know where more than 50% of them are today. They are the lawyers, the teachers, meat cutters, computer operators, and medical transcriptionists, that came to school from the broken home, from the dirt floor, from the drunken father, from the overprotective mother, and from an overindulgent society. Yes, I believe the sighted can teach the blind if they will only hold their proper perspective. Completely adjust to blindness? No, one lifetime is not enough.

PUBLIC LAW 94-142: ONE YEAR LATER

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Georgia Academy for the Blind
Macon, Georgia

It is a privilege for me to have an opportunity to discuss the implications and impact of PL 94-142 on the education and training of visually impaired children and young adults. I suppose that the above is an appropriate title, although, since I am an administrator of a residential program for visually impaired children, the topic could as well be "Reshaping the Role of the Residential School," or any other description which would describe appropriately the extensive changes in delivering educational services to visually impaired boys and girls. As an introduction, I would like to call your attention to the following quote which many of you will pleasantly recall from Louis Carroll's *Alice in Wonderland*:

"Will you tell me, please, which way I ought to go from here?" said Alice. "That depends a good deal on where you want to go" said the Cat. "I don't much care where" said Alice. "Then it doesn't matter which way you go" said the Cat.

Just like Alice in Wonderland, many of us in residential school administration have been confused and confounded about which way to go since the advent of PL 94-142. Unlike Alice, most of us care very much where we are going! Let's discuss for a moment the new and revised role that the residential school can play in the teaching-learning process for exceptional children. Perhaps the most important question you ask is "Are state residential schools for the blind adequate systems to provide educational opportunities for visually impaired children?" Even though I may be accused of discussing the age-old residential school versus placement in the local educational agency concept, I believe a careful study of the issues will indicate that it is not a question of the continuing existence of the residential school program, but what population can be served most appropriately in a residential facility.

The rules and regulations of PL 94-142 call for certain basic steps relative to the education of exceptional children. First, a current educational evaluation is completed for each individual of school age. Based upon this evaluation, an IEP is developed which lists short- and long-term goals and objectives, plus all educational and support services required. Then, a Placement Committee, made up of the parents, teachers, administrators, the student (when appropriate), and support services personnel, conducts a staffing to discern in what program a particular child could be served best.

Let us emphasize those steps again for the sake of clarity:

Identification Procedures

1. The psychoeducational evaluation
2. Development of the IEP
3. The Placement Committee meeting
4. The implementation of the IEP

In addition to these steps, an annual review must be conducted to insure that appropriate progress is being made and to insure that the placement has been most appropriate and has been made in the least restrictive environment.

Let's look at the idea of "least restrictive environment." I suppose that no other phrase has given educators more difficulty than this in quite some time. On second thought, maybe our educational jargon is intended to confuse! What is the least restrictive environment for one exceptional child is a very appropriate environment for others. The "least restrictive environment" is actually what is least restrictive for the individual child in question. It is not my intent to preserve the residential school as a place where all visually impaired children could be educated. To the contrary, it is my opinion that children who can be served best in a local educational association remain at home with the care and concern of parents. There are, however, numbers of children from small communities where local educational systems cannot be expected to provide the services needed to educate visually impaired children. At the Georgia Academy for the Blind, we applaud the mandate of PL 94-142 and have not taken a self-preservationist attitude toward retaining students who can be served in regular classrooms with their sighted peers. We do, however, take issue with the quality of many programs which have been established hurriedly and do not appear to offer adequate programming for blind children.

In the PL 94-142 regulations, reference is made to "appropriate education." To me, an appropriate education is at least all of the following services: traditional elementary and secondary academic subjects; vocational education specific to the needs of persons with limited vision; braille reading and writing; orientation and mobility; career education for the visually impaired; counseling by qualified individuals who particularly understand the ability of the person who is visually impaired and who have overcome the constant sense of paternalism which shelters those who do not need protection; daily living skills; physical and occupational therapy; adaptive physical education; and low vision services training. For multihandicapped children, appropriate education would also include the development of self-help skills and language development. In summary, an appropriate education appears to be a list of needs documented from the psychoeducational evaluation.

The PL 94-142 regulations indicate a continuum of services. It is my understanding that a continuum is a list of resources which go from most to least desirable. I believe a continuum of educational services is inappropriate when one is trying to decide on an individual basis what is most appropriate for a particular child. During the PL 94-142 hearings in Georgia, I took the opportunity, along with other special educators, to register the complaint that offering a continuum of services would be counterproductive to examining each individual case and selecting the least restrictive environment along with the most appropriate educational services. Although I have great respect for Dr. Maynard Reynolds and his work with the Council for Exceptional Children, I doubt that educational services can be rank-ordered like Maslow's Hierarchy of Needs. I suggest that we list all the types of services which should be available to visually impaired children in circular fashion and think of the child in the middle.

Let's consider for a moment parental involvement in the due process procedures instigated under PL 94-142. For the first time in my short twelve years of being associated with programs for exceptional children, the responsibility for the education of children has been placed equally on the shoulders of those of us in education and with parents. This is evidenced by signatures required for evaluation, for participation in the Placement Committee meetings, and for the involvement required of parents in the development of the IEP. In order to help parents understand the needs of visually impaired children, the Georgia Academy

has established workshops which deal with parent rights and responsibilities. Initially we approached parent participation with some trepidation. We were not at all sure of our responsibility as an intermediate educational association, nor were we sure of the responsibility that we had to the local system. We discovered very quickly at statewide special education meetings that local educational association members were eager to know how we might serve as a resource program and how we might be able to provide adjunctive services to visually impaired children enrolled in the public schools. As a matter of fact, PL 94-142 has developed a very positive communication system between all of the school systems in the State of Georgia and the Academy for the Blind. Perhaps many of you have had similar experiences. In conjunction with the State Department of Education, we have developed a statewide workshop to provide staff development and inservice training for teachers of the blind from public schools.

Although our school was not monitored during the 1977-78 school term, I did have an opportunity to work with Dr. Tom McCurran of Georgia State University and Humanics Associates who were charged with the responsibility of monitoring State schools for compliance with the Education for All the Handicapped Law. Persons who would like to have a copy of this document may obtain it by writing to me at Georgia Academy for the Blind, 2895 Vineville Ave., Macon, GA 31204. I think you would find it of some assistance to see how responsibilities are assigned among the local, state, and intermediate educational associations.

I have had an opportunity to read the "for and against PL 94-142" literature in the journals of AEVH, CEC, and NEA. It is my feeling that PL 94-142 means particularly good things for visually impaired children. I believe that 94-142 has opened doors for educational opportunities within the mainstream of public education in this country that have heretofore been closed. I understand that there are those of us who would support the repeal of 94-142. I am not one of those educators! I believe that 94-142 is a long overdue Civil Rights Bill for school-age handicapped children throughout the country. My friends in regular education have been very concerned with the comment "Special education today, regular education tomorrow." The implementation and the interface of special and regular education is a difficult process which requires extensive renovation of the existing curricula and programs to which we have all become accustomed. I recognize that the job of teachers throughout the past school year has, perhaps, been more difficult than any other year in the history of

programs for exceptional children. My own sense of empathy for teachers is reinforced by my frustration as an administrator in trying to understand the law, the implementation, and the due process procedures. I would like to call your attention to the National Advisory Committee on the Handicapped 1977 Annual Report. There is in this document a comprehensive description of the IEP process which is a most important key to establishing appropriate education experiences.

Alice in Wonderland is a wonderful story which conjures up childhood thoughts of where to go and how to get there. Perhaps we have all been like Alice in not knowing where we wanted to go and, therefore, not knowing how to reach a particular destination. It is my opinion that PL 94-142 has given us the direction to follow in establishing a free and appropriate education for each handicapped child. Let's continue to enjoy the story of *Alice in Wonderland*, but let's modify Alice's behavior just a bit. Wouldn't it be nice to hear:

"I care very much where I am going. I care very much about how I will get there and, more importantly, I care very much about those who I will influence on my way."

SAVI (SCIENCE ACTIVITIES FOR THE VISUALLY IMPAIRED):
DEVELOPING A NEW SCIENCE CURRICULUM

Ronald Schnur and Carl Berger

Midwest Trial Center for SAVI, University of Michigan
Ann Arbor, Michigan

SAVI (Science Activities for the Visually Impaired) is a series of science-based activities that bring hands-on experiences to visually impaired and multiply handicapped children. SAVI activities are now being field-tested in residential schools, special classrooms, resource rooms, itinerant programs, and ordinary classrooms on a national basis. It is planned that over the next calendar year development of the SAVI activities will be completed, to be followed by publication and dissemination.

The developers of SAVI are based at the Lawrence Hall of Science at the University of California in Berkeley. The Lawrence Hall is a science education center that has been a leader for many years in the movement of science education from textbook-centered learning towards interactive involvement with multi-sensory materials. In elementary science education, the Lawrence Hall is well known as the developer of SCIS (Science Curriculum Improvement Study), a widely used elementary science curriculum, which teachers of the visually impaired are familiar with through its adaptation as ASMB (Adapted Science Materials for the Blind). SAVI, however, is not an adaptation of a general science curriculum; rather, it is a new curriculum being developed specifically to meet the needs of visually impaired pupils across many settings.

SAVI activities, as developed thus far, are organized into a series of nine modules. Each module addresses a particular theme or concept, such as living organisms, outdoor biology, mixtures and solutions, sounds and vibrations, measurement and mapping, the human body, and solar energy. Each module, in turn, contains a series of two to eight activities arranged in increasing complexity. These activities are designed to be used as part of the complete module, or independently, or to be adapted for special use, or even to be broken into subactivities. SAVI is aimed at

children of approximately upper elementary school age, although it has been successfully used with children both older and younger.

Three major principles have guided the design of SAVI activities. First, they are extremely flexible in order to accommodate the very wide range of abilities among visually impaired students. Second, all SAVI activities actively involve students in hands-on experiences. Third, SAVI activities use simple, ordinary materials rather than specialized equipment. These principles can be illustrated by examples of SAVI in action.

For instance, in an activity called "Rafts" youngsters have experience with floating, sinking, balance and other concepts by using small wooden rafts in basins of water. The rafts tip over with a splash if enough metal washers are placed on them. Students systematically vary the thickness of the rafts and the number of washers in exploration of the materials, using simple but basic scientific processes of observation, prediction, description, measurement, and hypothesis-generation. Very young or severely impaired children can use the materials to have simple sensory-motor experiences with water and the sinking and floating properties of objects. Older children can focus on the variables that are important in predicting. Advanced or especially able students can use the same materials to record data and even to plot tables of volume versus weight to explore the mathematics of floating and displacement. And the materials are inexpensive, uncomplicated, and actively involve the student.

Besides being appropriate for use with students of varying ability levels, SAVI is flexible because it involves many subject areas besides science as such. In fact, we prefer to call the activities "science-based" rather than "science activities." For instance, in two activities, "Origin of Seeds" and "Seed-Grams," youngsters dig into fresh fruits and vegetables to hunt for seeds to observe and compare them. Pea pods or tangerine wedges can be used as sources of seeds. Students learn how to record the number of seeds per pod on histogram boards. But this activity is not limited to learning science facts. Depending on the youngster's abilities and the classroom emphasis, these activities have been used in learning daily living skills - cutting, peeling, marketing; in mathematics - averaging, predicting, graphing; in health - washing and food preparation; even in language, as children use new words and concepts to describe their investigations. Individual teachers have even used this activity as the basis for

social studies work by considering the places of origin and the marketing patterns of fruits and vegetables.

These activities using seeds illustrate a second principle guiding SAVI activities. That is, the activities use familiar materials to promote a transfer of learning from the classroom to the home. When necessary, ordinary materials are supplemented by special aids. It has been found that many visually impaired children lack experience with even common objects, so that these are emphasized in the activities. It surprises some of our trial teachers to find children who have never seen an ice cube, for instance, or do not know that there are such things as seeds.

A third principle guiding the SAVI activities is that learning is facilitated when children are involved actively with multi-sensory, hands-on materials. To keep the focus of the activities on the materials and on the children's use of them, SAVI does away with a textbook. Instead, very clear, illustrated activity folios are provided to guide the teacher in arranging activities to allow for children's exploration. This active involvement is especially important for visually impaired children who often have far too few ways to manage their environment. For instance, one series of activities uses ordinary crayfish to investigate such behaviors of living organisms as feeding, reproduction, locomotion, growth, and territoriality. Crayfish are fascinating animals, able to be handled without harm to themselves or the handler, not too difficult to care for, and are so appealing that teachers have used activities with them as rewards at the end of the day or the week.

At this time SAVI activities are in the process of field-testing in varied settings ranging from residential schools to regular elementary classrooms containing a visually impaired child. Usually the activities are used from two to five times a week, with each SAVI activity occupying from one to four weeks. Eventually, the number of activities will enable teachers to plan up to approximately a three-year curricular sequence. Usually 30- to 45-minute periods are allowed for SAVI activities, although the varied nature sometimes means that an activity, such as growing seedlings through a complete life cycle, will be organized and then followed over a course of time by short observations.

While SAVI has been found to fit neatly into residential schools and special classrooms, some special modifications are needed in

extending it into regular classrooms containing a visually impaired child. These modifications may include use of SAVI as independent projects, as an interest corner or as an activity table, or as a rotating small-group experience. Perhaps the most interesting use in regular classrooms has been as a whole-class activity. That is, instead of the more conventional strategy of adapting regular materials for a visually handicapped child to use in a regular classroom, this approach uses special materials for everyone, including the visually impaired child who then participates without modification. This is possible, of course, because the flexibility of the activities has meant that all of them have been fine activities for use with non-handicapped children as well as handicapped children. And the teacher benefits from this approach because he/she needs to use only one set of activities with the class rather than a regular version plus an adapted version for the handicapped.

In the "Howdy Heart" activity, simple stethoscopes are used as children observe and measure heartbeats. More advanced students can record heartbeats and compare them under varied conditions. One teacher felt that the integration of the handicapped child was enhanced by having activities that could be used without special adaptations.

Some SAVI activities have particular benefits for visually impaired children in their emphasis on the use of the senses of touch, hearing, and movement, as well as vision. In fact, a visitor to a class using SAVI might not identify the activities as science activities at all. Instead, they might appear as very good activities in sensory development, in concept development, or even in pre-mobility skills. For instance, an activity called "Drop-It" uses a simple cardboard carton and ordinary objects that are dropped and discriminated by sound. Advanced students can use word games or math games with these materials in a way that has made them interesting for students through high school. Another activity has the students making concrete models of their classrooms.

Before closing, the issues of teacher training and the future developments with SAVI should be mentioned. Appropriate teaching skills are a major element in the use of SAVI. Open, hands-on materials require a teacher to act as a facilitator, guide, and resource person rather than solely as a source of facts. Happily, most teachers of the visually impaired seem to be experts in adapting and modifying materials and in using concrete materials

in classrooms. Introduction of teachers to SAVI follows the same principles. Rather than handing teachers a guide and a box of materials, activities are introduced by having the teachers use them. Not only does this method provide a good introduction to SAVI, but it functions as a strong inservice experience in curricular development and in teaching skills.

As you have seen, most of the activities do not require an esoteric or even a very extensive knowledge of science. In fact, some of the activities, such as sprouting seeds or using megaphones to collect sound, may already be in some teachers' bag of favorite projects. One of the chief merits of SAVI is that a large number of such activities will have been shown by field-testing to be effective, and they will be packaged in such a way as to make them easily usable by teachers.

In the future, it is hoped that dissemination will allow a large number of teachers to be introduced to SAVI. While the evaluation of the activities now being tested is not complete, the developers are optimistic about the eventual success and adoption of SAVI. Our trial teachers are eager to continue with the program and have been invaluable in helping us to criticize and improve it.

For those who wish additional information on SAVI, please write to the Field Coordinator for SAVI, Lawrence Hall of Science, Berkeley, CA 94720.

SUPPLIERS OF MATERIALS AND SERVICES

Listed below, in alphabetical order, are agencies and companies that have indicated that they provide materials and services to multiply and visually handicapped children. We would like to thank all of them for their contributions which have helped to cover the expenses of the 54th Biennial Conference of the Association for Education of the Visually Handicapped.

The symbol + indicates that free catalogues or informational pieces are available on request.

The letters refer to the areas in which each listed organization offers materials or services. These are:

- | | |
|--|-----------------------------|
| a. Adaptive Equipment | i. Low Vision Aids |
| b. Agencies/Schools/Organizations
Serving the Blind and
Visually Handicapped | j. Orientation and Mobility |
| c. Audio-Visual Aids | k. Publishers - Braille |
| d. Braille Equipment and Supplies | l. Publishers - General |
| e. Communication Devices | m. Publishers - Large Print |
| f. Devices for Daily Living | n. Publishers - Recorded |
| g. Educational Aids | o. Recreation/Games/Toys |
| h. Equipment for Motor
Development | p. Sensory Development |

+ American Association of Workers for the Blind
Attn: John Maxon or Carleater Holmes
1511 K Street, N.W.
Washington, DC 20005
(202) 347-1559

b

+ American Foundation for the Blind, Inc.
15 W. 16th Street
New York, NY 11217
(212) 924-0420

a, b, e, f,
g, l, o, p

+ American Printing House for the Blind
Attn: Carl Lappin
1839 Frankfort Avenue
Louisville, KY 40206
(502) 895-2405

b, c, d, g,
h, i, j, k,
m, n, o, p

- + American Thermoform Corporation d
 Attn: Babs Hersh, Administrative Assistant
 8640 E. Slauson Avenue
 Pico Rivera, CA 90660
 (213) 723-9021

- + Apollo Lasers, Inc. a, e, f, g,
i
 Attn: Ronald P. Pulcini
 6357 Arizona Circle
 Los Angeles, CA 90045
 (213) 776-3343

- + Arkansas Enterprises for the Blind, Inc. b, i, j
 Attn: Howard H. Hanson
 2811 Fair Park Blvd.
 Little Rock, AR 72204
 (501) 664-7100

- + Blindness, Visual Impairment, Deaf-Blindness l
 Semiannual Listing of Current Literature
 Attn: Managing Editor
 c/o N.I.R.S., 919 Walnut Street - Room 400
 Philadelphia, PA 19107
 (215) 627-3501

- + R.R. Bowker Company l, m
 Attn: Iris L. Rugoff
 Box 1807
 Ann Arbor, MI 48106
 (313) 764-2774

- + Center for Independent Living b, c, f, g,
j, m, n, p
 New York Infirmary
 Attn: Douglas E. Inkster
 318 East 15th Street
 New York, NY 10003
 (212) 674-7580

- + W.B. Cole Supply Company b, f, g, o
 Attn: Harvey Fersten
 P.O. Box 1717
 Pasadena, TX 77501
 (713) 477-7171

- + Duxbury Systems, Inc. d
 Attn: Joseph Sullivan
 123 Lowell Drive
 Stow, MA 01775
 (617) 897-8207

- + Elinfa Inc. d, e, g
 Attn: Mr. O. Tretiakoff or Mrs. G. Snider
 1725 K Street, N.W.
 Washington, DC 20006
 (202) 857-0684

- Encyclopaedia Britannica l
 Attn: Ann Gordon (Mrs.)
 425 N. Michigan Avenue
 Chicago, IL 60611
 (312) 321-6903

- + Enrichment Reading Corporation of America a, c, g
 Attn: James R. Aumann
 Iron Ridge, WI 53035
 (414) 387-4848

- + Exceptional Play, Inc. g, h, o, p
 Attn: Becky Williams
 P.O. Box 1015 C
 Lawrence, KS 66044
 (913) 842-9368

- + Hadley School for the Blind g
 Attn: Student Services Coordinator
 700 Elm Street
 Winnetka, IL 60093
 (312) 446-8111

- + Howe Press - Perkins School b, d, f, g,
j, o
 Attn: Harry J. Friedman
 175 N. Beacon Street
 Watertown, MA 02172
 (617) 924-3434

- + Institute for the Development of Creative Child Care 1
 Attn: David R. Pushaw
 927 Bemis S.E.
 Grand Rapids, MI 49506
 (616) 454-9357

- + International Marketing Services b, c, f, g,
 Attn: Robert Stevenson or Robert Martin i
 1442 U.S. 19 South, Suite 108-1
 Clearwater, FL 33516
 (813) 535-3882

- + January Productions, Inc. c, g, i, o,
 Attn: Tom Crawford p
 13-00 Plaza Road
 Fair Lawn, NJ 07410
 (201) 797-2575

- + Kurzweil Computer Products c, e, f, g
 Attn: Bernice Shapiro
 264 3rd Street
 Cambridge, MA 02142
 (617) 864-4700

- + Lexicon Inc. c
 Attn: Jack Letscher
 60 Turner Street
 Waltham, MA 02154
 (617) 891-6790

- + Library of Congress, Division for the Blind a, b, c, d,
 and Physically Handicapped e, i, k
 Attn: Frank Kurt Cylke
 1291 Taylor Street, N.W.
 Washington, DC 20542
 (202) 882-5500

- + Library Reproduction Service, Div. of Microfilm m
 Company of California, Inc.
 1977 S. Los Angeles Street
 Los Angeles, CA 90011
 (213) 749-2463

- + Matilda Ziegler Magazine for the Blind k, n
 Attn: Frances A. Koestler, Editor
 20 W. 17th Street
 New York, NY 10011
 (212) 242-0263

- + Mechstat, Incorporated b, e, f, g,
h, i, j, o,
p
 Attn: D. Reginald Traylor
 830 N.E. Loop 410, Suite 210
 San Antonio, TX 78209
 (512) 828-0203

- + Mega-Diastix Specialty Systems b, i
 Ames Company, Box 70
 Division Miles Laboratories
 Attn: Helen M. Free
 Elkhart, IN 46515
 (219) 264-8662

- Melton Book Co., Inc.
 Multimedia Division
 Attn: Carolina Pace
 111 Leslie Street
 Dallas, TX 75207
 (214) 651-1703

- + Mosier Materials g, h, j, p
 Attn: Kay Mosier
 Box 3036
 San Bernardino, CA 92413
 (714) 864-0296

- + Noir Sunglasses - Rec. Innov. Co. i
 Attn: Ms. D. Langley or Mr. D. Breece
 P.O. Box 159
 S. Lyon, MI 48178
 (313) 769-5565

- The Puzzled Company
 Attn: Philip R. Einsohn
 P.O. Box 5743
 Austin, TX 78763
 (512) 454-6244

- + Rhythms Productions c, g, j, l,
o, p
Attn: Ruth White
Whitney Bldg, Box 34485
Los Angeles, CA 90034
(213) 836-4678

- + Science for the Blind Products a, e, f, g,
i, o
Attn: Lee and Tom Benam
Box 120
Bala-Cynwyd, PA 19004
(215) 664-9429

- + SCM Corporation (Smith-Corona Group) g, h, i
Attn: Arthur P. Wales
65 Locust Avenue
New Canaan, CT 06840
(203) 972-1471

- + The Seeing Eye, Inc. b
Attn: David Loux
Morristown, NJ 07960
(201) 539-4425

- Social Security Administration b
6401 Security Blvd.
Baltimore, MD 21235

- South Dakota School for the Visually Handicapped b, j
Attn: Jules Cote
423 17th Avenue, S.E.
Aberdeen, SD 57401
(605) 622-2580

- + Southern Microfilm Corporation m
Attn: Bill Marshall
900 W. 34th Street
Houston, TX 77018
(713) 869-0181

- + SPED Publications e, g, l
Attn: Billie M. Taylor
2010 Eagle View
Colorado Springs, CO 80909
(303) 571-6991

- + Step Inc. g
 Attn: Don Morgan
 South Complex - Paine Field
 Everett, WA 98204
 (206) 355-9830

- + Telesensory Systems, Inc. a, b, d, e,
g, j, o
 Attn: John G. Beard, W. Region Mgr.
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